



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY COMPLIANCE SUMMARY REPORT



Date 5/4/22

Wheel Plant Wheelabrator North Andover
Unit 1 Unit Unit 1
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
5/4/2022	0	60	10.0		139		5		72		93		4			13		298		166.5	
5/4/2022	1	60	10.2		158		11		68		84		5			13		304		166.5	
5/4/2022	2	60	9.9		161		19		65		71		5			13		318		168.2	
5/4/2022	3	60	10.0		162		22		83		74		5	5		13		309	307	169.0	167.5
5/4/2022	4	60	10.2		159		15		59		75		5			13		308		166.1	
5/4/2022	5	60	10.1		162		16		46		65		5			13		313		167.1	
5/4/2022	6	60	9.9		149		6		41		85		7			13	13	314		167.4	
5/4/2022	7	60	10.1		141		5		41		89		6	6		13		310	311	167.8	167.1
5/4/2022	8	60	10.4		138		5		39		87		6			14		301		166.1	
5/4/2022	9	60	10.2		151		20		46		55		8			14		303		167.1	
5/4/2022	10	60	10.3		155		21		52		59		7			14		304		166.9	
5/4/2022	11	60	10.2		147		24		60		61		7	7		14		304	303	167.0	166.8
5/4/2022	12	60	10.0		150		20		54		64		7			13		308		169.3	
5/4/2022	13	60	9.9		157		17		42		60		7			13		313		167.5	
5/4/2022	14	60	9.8		162		13		41		69		7			14		314		166.6	
5/4/2022	15	60	9.9		152		14		38		62		7	7		14	14	314	312	169.1	168.1
5/4/2022	16	60	9.8		157		17		47		65		6			14		310		168.0	
5/4/2022	17	60	10.1		158		21		59		64		6			14		306		165.3	
5/4/2022	18	60	10.2		165		29		70		58		6			14		310		166.3	
5/4/2022	19	60	10.2		178		32		59		46		5	6		14		313	310	168.2	167.0
5/4/2022	20	60	10.0		167		19		48		60		6			13		314		166.8	
5/4/2022	21	60	10.1		169		17		42		61		5			14		311		165.9	
5/4/2022	22	60	10.0		163		18		42		57		5			14		313		166.5	
5/4/2022	23	60	9.9		161		21		53		59		5	5		14	14	319	314	167.3	166.6

Average:
Geometric Mean Average:

Limit:

157	15
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

71
≥ 75% Removal Efficiency

see above
≤ 69 ppmc 4-HR Block Average

see above
≤ 12 lb/hr 8-HR. Block Average

see above
≤ 345 °F 4-HR Block Average

see above
≤ 173 klb/hr 4-HR Block Average

Status Flags

- I - Invalid
- B - Bad
- C - Calibration
- M - Maintenance
- F - Offline
- P - Purge
- T - Out of Control
- E - Excluded
- ^ - Startup
- * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY COMPLIANCE SUMMARY REPORT



Date 5/4/22

Wheel Plant Wheelabrator North Andover
Unit 2 Unit Unit 1
Outlet Source Outlet

Date	Hour	On-Line Minutes	O2		NOx		SO2					CO			Carbon Feed		FF Temp (deg F)		Steam KLbs/Hr		
			Out Vol % Dry	Status	Outlet ppm 7%O2	Status	Outlet ppm 7%O2	Status	Inlet ppm 7%O2	Status	Removal	Status	Outlet ppm 7%O2	Status	4 Hr Block	Status	Lbs/Hr Avg.	8 Hr Block	1 Hr Avg.	4 Hr Block	1 Hr Avg.
5/4/2022	0	60	10.2		186		4		75		94		0			15		310		167.5	
5/4/2022	1	60	10.2		187		3		65		96		0			15		310		167.9	
5/4/2022	2	60	10.1		193		4		75		95		0			15		310		167.3	
5/4/2022	3	60	10.0		194		2		56		97		0	0		15		310	310	168.6	167.8
5/4/2022	4	60	10.1		196		0		64		100		2			14		310		167.3	
5/4/2022	5	60	10.1		196		0		56		100		0			14		310		167.6	
5/4/2022	6	60	10.1		198		0		59		100		2			15		310		167.8	
5/4/2022	7	60	10.3		187		5		101		95		2	1		14	15	310	310	167.5	167.6
5/4/2022	8	60	10.2		184		2		79		98		2			14		310		168.1	
5/4/2022	9	60	10.4		195		3		63		95		2			14		310		166.4	
5/4/2022	10	60	10.3		198		0		112		100		2			14		310		167.8	
5/4/2022	11	60	8.5		142		11		105		90		2	2		14		310	310	168.1	167.6
5/4/2022	12	60	8.3		154		1		60		98		2			14		310		167.5	
5/4/2022	13	60	8.1		180		1		58		99		2			14		310		167.9	
5/4/2022	14	60	8.3		181		3		64		95		2			14		310		167.5	
5/4/2022	15	60	8.5		178		1		52		98		2	2		13	14	310	310	168.1	167.8
5/4/2022	16	60	8.2		185		1		62		99		2			13		310		167.7	
5/4/2022	17	60	8.3		185		11		88		87		3			14		310		167.6	
5/4/2022	18	60	8.4		189		13		91		86		2			14		310		167.4	
5/4/2022	19	60	8.3		190		3		63		96		2	2		13		310	310	166.9	167.4
5/4/2022	20	60	8.2		186		1		56		98		2			14		310		167.4	
5/4/2022	21	60	8.3		193		0		51		100		1			14		310		167.9	
5/4/2022	22	60	8.3		194		0		56		100		2			13		310		168.3	
5/4/2022	23	60	8.3		187		2		63		97		2	2		14	14	310	310	167.2	167.7

Average:
Geometric Mean Average:

Limit:

186	1
≤ 205 24-HR Block Avg.	≤ 29 24-HR Geometric Mean

OR

99
≥ 75% Removal Efficiency

see above
≤ 69 4-HR Block Average

ppmc

see above
≤ 12 8-HR. Block Average

lb/hr

see above
≤ 345 4-HR Block Average

°F

see above
≤ 173 4-HR Block Average

klb/hr

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WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-May-2022

Plant Wheelabrator North Andover
Unit Unit 1
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	2	2	2	2	2	2	2	2	2	2	2
1	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2
3	2	2	2	2	2	2	2	2	2	2	2
4	2	2	2	2	2	2	2	2	2	2	2
5	2	2	2	2	2	2	2	2	2	2	2
6	2	IC	6	IC	2	2	2	2	2	2	2
7	2	2	2	2	2	2	2	2	2	2	2
8	2	2	2	2	2	2	2	2	2	2	2
9	2	2	2	2	2	2	2	2	2	2	2
10	2	2	2	2	2	2	2	2	2	2	2
11	2	2	2	2	2	2	2	2	2	2	2
12	2	2	2	2	2	2	2	2	2	2	2
13	2	2	2	2	2	2	2	2	2	2	2
14	2	2	2	2	2	2	2	2	2	2	2
15	2	2	2	2	2	2	2	2	2	2	2
16	2	2	2	2	2	2	2	2	2	2	2
17	2	2	2	2	2	2	2	2	2	2	2
18	2	2	2	2	2	2	2	2	2	2	2
19	2	2	2	2	2	2	2	2	2	2	2
20	2	2	2	2	2	2	2	2	2	2	2
21	2	2	2	2	2	2	2	2	2	2	2
22	2	2	2	2	2	2	2	2	2	2	2
23	2	2	2	2	2	2	2	2	2	2	2

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown



WHEELABRATOR NORTH ANDOVER A WIN-WASTE INNOVATIONS COMPANY OPACITY REPORT



Date 04-May-2022

Plant Wheelabrator North Andover
Unit Unit 2
Source Outlet

Opacity is a measure of how much soot or smoke may be contained in stack emissions. The more smoke that is contained in the emissions the higher the level of opacity. Continuous opacity monitors located after all of the air pollution control equipment measure the opacity of the emissions from each boiler. Typically the human eye can not detect or see smoke that is less than 5% opacity. You won't see smoke from a modern trash-to-energy plant although in colder weather you will see water vapor condensation, similar to seeing your breath on a cold day. This is not considered opacity. We have a permit limit established by the Massachusetts Department of Environmental Protection of 10% opacity averaged every six (6) minutes.

Limit 10 %

Time (hr)	1-6 min	7-12 min	13-18 min	19-24 min	25-30 min	31-36 min	37-42 min	43-48 min	49-54 min	55-60 min	Average
0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0
6	2	IBC	4	IBC	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0

Status Flags

I - Invalid C - Calibration F - Offline T - Out of Control ^ - Startup
 B - Bad M - Maintenance P - Purge E - Excluded * - Shutdown